

## **METHOD AND APPARATUS FOR UTILIZING CHANNEL STATE INFORMATION IN A WIRELESS COMMUNICATION SYSTEM**

### **ABSTRACT**

Techniques for transmitting data from a transmitter unit to a receiver unit in a multiple-input multiple-output (MIMO) communication system. In one method, at the receiver unit, a number of signals are received via a number of receive antennas, with the received signal from each receive antenna comprising a combination of one or more signals transmitted from the transmitter unit. The received signals are processed to derive channel state information (CSI) indicative of characteristics of a number of transmission channels used for data transmission. The CSI is transmitted back to the transmitter unit. At the transmitter unit, the CSI from the receiver unit is received and data for transmission to the receiver unit is processed based on the received CSI.